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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,142	10/16/2003	Michael R. Furst	A2486USNP/XERZ201277US01	8247

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EXAMINER	
RODRIGUEZ, LENNIN R	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,142	FURST ET AL.	
	Examiner	Art Unit	
	LENNIN RODRIGUEZ	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-9 and 33-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-9 and 33-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/21/2011 have been fully considered but they are not persuasive. Applicant's argument regarding "Chiba fails to disclose that the control program data is embedded, and instead implies that the control program data is loaded into the system each time the system is initialized" has been fully considered; in response the examiner first would like to point out that just because the examiner cited a specific portion of a reference does not exclude the reference as a whole and all of its disclosure. Furthermore, the claims disclose an embedded system connected to a electroreprographic device, the device model agent is disclosed as being stored at the electroreprographic device, Figure 1 taken as a whole does disclose this feature, but even applicant's argument about the RAM being volatile Chiba itself on Figure 10 for example and column 10, lines 34-49 it is shown how the programs can be also stored in the ROM of the printer (hardware).

2. Applicant's argument regarding "Coupling two devices is different than an embedded system comprising a device model agent representative of service management stored within the memory of the physical hardware of the device, as claimed" has been fully considered; in response the examiner would like to point out the claims disclose an embedded system connected to a electroreprographic device, so the claimed invention does teach the embedded system connected to an electroreprographic device. Furthermore, Chapman has been use solely for the actual

limitation "dynamic provisioning to automatically download software as needed to add, delete, update and customized services", the fact that the device model agent is in the physical memory of the printer has been addressed with the Chiba reference.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-2, 4, 33 and 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba et al. (US 7,187,459) in view of Whale (US 2002/0188504), Kimura (US 6,226,097) and Chapman (US 7,466,442).

(1) regarding claim 1:

Chiba '459 discloses an embedded system (printer control software 20a in Fig. 1, it has been disclosed in applicant's disclosure that an embedded system in this particular case is a software element; the system is written strictly for the controlling of a printer, thus satisfying the definition of embedded system) connected to an input-output terminal of an electroreprographic device through at least one existing device interface (interface 1031 in Fig. 10) and comprising data collection (Fig. 7 and column 8, lines 46-55) and display functionality (display unit 1021 in Fig. 9), and a local user interface for operation and management of functionality locally (1021 and 1022 in Fig. 9), and,

wherein the embedded system comprises a device model agent representative of service management stored within the memory of the physical hardware of the

electroreprographic device (control program storage area 16 in Fig. 1 has been interpreted as the equivalent to a device model agent).

Chiba '459 discloses all the subject matter as described above except embedded system that is in communication with a remote services host and a remote asset management system for communicating through the local UI services to be selectively added to or performed on the electroreprographic device, which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent in response to active, dynamic monitoring of the electroreprographic device events, device status and consumable component supplies by the device model agent,

However, Whale '504 teaches embedded system that is in communication with a remote services host (170 in Fig. 6 and paragraph [0043], lines 1-3, where remote service host has been interpreted as a remote vendor for supplying consumables) and a remote asset management system (176 in Fig. 6 and paragraph [0050], where the order processing component is in charge of assessing the consumables needed, thus asset management) for communicating through the local UI services to be selectively added to or performed on the electroreprographic device (paragraph [0044], lines 4-9, where users can enter an order selectively to the vendor, where an assessment of the consumables is made (paragraph [0042], lines7-14)), which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent (176 in Fig. 6 and paragraph [0050], where the order processing component is in charge of assessing the

consumables needed, paragraph [0044], lines 4-9, where users can enter an order selectively to the vendor, where an assessment of the consumables is made (paragraph [0042], lines7-14)) in response to active, dynamic monitoring of the electroreprographic device events, device status and consumable component supplies by the device model agent (paragraph [0042], lines 7-14),

Having a system of Chiba '459 reference and then given the well-established teaching of Whale '504 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459 to include embedded system that is in communication with a remote services host and a remote asset management system through the APIs for communicating through the local UI services to be selectively added to or performed on the electroreprographic device, which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent in response to active, dynamic monitoring of the electroreprographic device events, device status and consumable component supplies by the device model agent as taught by Whale '504 because this will allow marketing and promotional activities to be initiated at times when customers might be most receptive to such activities. Specifically, the techniques allow a vender to point out usage changes to a customer, thereby alerting the customer that decisions need to be made regarding purchase options. By both alerting a customer to this fact and at the same time offering enhanced pricing structures or other promotions, a vendor is able to maximize its promotional efforts (paragraph [0064]).

Chiba '459 and Whale '504 disclose all the subject matter as described above except specifically teaching a services platform and APIs for remote connectivity and device-centric services.

However, Kimura '097 teaches a services platform and APIs for remote connectivity and device-centric services (711 in Fig. 7 and column 6, lines 14-21, where APIs are a provided within an operating system of a PC and since Fig. 7 clearly shows a network (remoteness) it will provide a service platform for the remote connection).

Having a system of Chiba '459 and Whale '504 and then given the well-established teaching of Kimura '097 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459 and Whale '504 to include a services platform and APIs for remote connectivity and device-centric services as taught by Kimura '097 because it would be an advantage using existent components of an operating system, thus not incurring in unnecessary costs of implementation, since there are already tools available with the system in use.

Chiba '459, Whale '504 and Kimura '097 disclose all the subject matter as described above except dynamic provisioning to automatically download software as needed to add, delete, update, and customize services.

Chapman '442 teaches dynamic provisioning to automatically download software as needed to add, delete, update, and customize services (column 9, line 36 through column 10, line 15, where the system downloads a plug-in software, and by

downloading the system is updating services by way of add the new updated plug-in and replacing the old one to customize the printer preferences).

Having a system of Chiba '459, Whale '504 and Kimura '097 and then given the well-established teaching of Chapman '442 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504 and Kimura '097 to include dynamic provisioning to automatically download software as needed to add, delete, update, and customize services as taught by Chapman '442 because for allowing for customization to the standard product and a print job without modifying the standard printing system in a non-uniform manner. Further, it would be able to exercise the customization of a print job dynamically from within a print job (column 1, line 66 through column 2, line 3).

(2) regarding claim 2:

Chiba '459 further discloses a networked, embedded personal computer in a housing with no direct input or output devices (50 in Fig. 1, where there is not apparent direct input or output for the printer control software (embedded system)).

(3) regarding claim 4:

Chiba '459 further discloses a UI available via a browser running on a computer on a network to which the system is connected (1021 in Fig. 9).

(4) regarding claim 33:

Chiba '459, Whale '504 and Kimura '097 disclose all the subject matter as described above except wherein the services comprise one of operating software upgrade, device stack supply or maintenance adjustments.

Chapman '442 teaches wherein the services comprise one of operating software upgrade (column 9, line 36 through column 10, line 15, where the system downloads a plug-in software, and by downloading the system is updating services by way of add the new updated plug-in and replacing the old one to customize the printer preferences), device stack supply or maintenance adjustments.

Having a system of Chiba '459, Whale '504 and Kimura '097 and then given the well-established teaching of Chapman '442 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504 and Kimura '097 to include wherein the services comprise one of operating software upgrade, device stack supply or maintenance adjustments as taught by Chapman '442 because for allowing for customization to the standard product and a print job without modifying the standard printing system in a non-uniform manner. Further, it would be able to exercise the customization of a print job dynamically from within a print job (column 1, line 66 through column 2, line 3).

(5) regarding claim 34:

Chiba '459 discloses all the subject matter as described above except wherein the active, dynamic monitoring device status incorporates data of at least one of: billing meter, input-output terminal faults, media path jams, image area coverage, media use by weight, size or type, feature usage, toner status, simple or duplex printing, media tray use, toner status, reduction and development, and highest frequency of service use.

However, Whale '504 teaches wherein the active, dynamic monitoring device status incorporates data of at least one of: billing meter, input-output terminal faults, media path jams, image area coverage, media use by weight, size or type, feature usage, toner status, simple or duplex printing, media tray use, toner status (paragraph [0042], lines 7-14), reduction and development, and highest frequency of service use.

Having a system of Chiba '459 reference and then given the well-established teaching of Whale '504 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459 to include wherein the active, dynamic monitoring device status incorporates data of at least one of: billing meter, input-output terminal faults, media path jams, image area coverage, media use by weight, size or type, feature usage, toner status, simple or duplex printing, media tray use, toner status, reduction and development, and highest frequency of service use as taught by Whale '504 because this will allow marketing and promotional activities to be initiated at times when customers might be most receptive to such activities. Specifically, the techniques allow a vender to point out usage changes to a customer, thereby alerting the customer that decisions need to be made regarding purchase options. By both alerting a customer to this fact and at the same time offering enhanced pricing structures or other promotions, a vendor is able to maximize its promotional efforts (paragraph [0064]).

5. Claims 3, 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba et al. (US 7,187,459), Whale (US 2002/0188504) and Kimura (US

6,226,097) and Chapman (US 7,466,442) as applied to claims above, and further in view of Engstrom et al. (US 6,463,078).

(1) regarding claim 3:

Chiba '459, Whale '504, Kimura '097 and Chapman '442 disclose all the subject matter as described above except wherein the system is connected to the IOT through at least two physical interfaces.

However, Engstrom '078 further discloses wherein the system is connected to the IOT through at least two physical interfaces (152 and 151 in Fig. 3).

Having a system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 and then given the well-established teaching of Engstrom '078 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 to include that the system is connected to the IOT through at least two physical interfaces as taught by Engstrom '078 because it would make the Chiba '459, Whale '504 and Kimura '097 system more versatile and able to have more connections with other devices providing more capabilities for the user to choose.

(2) regarding claim 5:

Chiba '459, Whale '504, Kimura '097 and Chapman '442 disclose all the subject matter as described above except a web server.

However, Engstrom '078 teaches a web server (column 21, lines 45-47).

Having a system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 and then given the well-established teaching of Engstrom '078 reference, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 to include a web server as taught by Engstrom '078 because it would make the Chiba '459, Whale '504, Kimura '097 and Chapman '442 system more versatile and able to have more connections with other devices providing more capabilities for the user to choose.

(3) regarding claim 6:

Chiba '459 discloses in an embedded system (printer control software 20a in Fig. 1, it has been disclosed in applicant's disclosure that an embedded system in this particular case is a software element; the system is written strictly for the controlling of a printer, thus satisfying the definition of embedded system) comprising a server connected to an input-output terminal (interface 1031 in Fig. 10) of an electroreprographic device and to a network (1030 in Fig. 10), a method of interacting with the embedded system comprising:

using a browser as the local user interface for the embedded system (1021 in Fig. 9), and

wherein the embedded system comprises a device model agent representative of service management stored within the memory of the physical hardware device (control program storage area 16 in Fig. 1 has been interpreted as the equivalent to a device model agent), and dynamic provisioning (S304 and S306 in Fig. 7, where if the printer does not have the control program data necessary, it will be downloaded).

Chiba '459 discloses all the subject matter as described above except in communication with a remote services host and a remote asset management .system for communicating through the local UI services to be electively added to or performed on the electroreprographic device, which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent and further including communicating the services from the remote services host and the remote asset management system to the embedded system in response to active, dynamically monitoring electroreprographic device events, device status and consumable component supplies by the device model agent.

However, Whale '504 teaches embedded system that is in communication with a remote services host (170 in Fig. 6 and paragraph [0043], lines 1-3, where remote service host has been interpreted as a remote vendor for supplying consumables) and a remote asset management system (176 in Fig. 6 and paragraph [0050], where the order processing component is in charge of assessing the consumables needed, thus asset management) for communicating through the local UI services to be electively added to or performed on the electroreprographic device (paragraph [0044], lines 4-9, where users can enter an order selectively to the vendor, where an assessment of the consumables is made (paragraph [0042], lines7-14)), which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent (176 in Fig. 6 and paragraph [0050], where the order processing component is in charge of assessing the

consumables needed, paragraph [0044], lines 4-9, where users can enter an order selectively to the vendor, where an assessment of the consumables is made (paragraph [0042], lines7-14))and further including communicating the services from the remote services host and the remote asset management system to the embedded system in response to active, dynamically monitoring electroreprographic device events, device status and consumable component supplies by the device model agent (paragraph [0042], lines 7-14).

Having a system of Chiba '459 reference and then given the well-established teaching of Whale '504 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459 to include embedded system that is in communication with a remote services host and a remote asset management .system for communicating through the local UI services to be electively added to or performed on the electroreprographic device, which services are determined by the remote services host and the remote asset management system by the communication with the electroreprographic device model agent and further including communicating the services from the remote services host and the remote asset management system to the embedded system in response to active, dynamically monitoring electroreprographic device events, device status and consumable component supplies by the device model agent as taught by Whale '504 because this will allow marketing and promotional activities to be initiated at times when customers might be most receptive to such activities. Specifically, the techniques allow a vender to point out usage changes to a customer, thereby alerting the customer that

decisions need to be made regarding purchase options. By both alerting a customer to this fact and at the same time offering enhanced pricing structures or other promotions, a vendor is able to maximize its promotional efforts (paragraph [0064]).

Chiba '459 and Whale '504 disclose all the subject matter as described above except for specifically teaching APIs for remote connectivity.

However, Kimura '097 teaches APIs for remote connectivity (711 in Fig. 7 and column 6, lines 14-21, where APIs are a provided within an operating system of a PC and since Fig. 7 clearly shows a network (remoteness)).

Having a system of Chiba '459 and Whale '504 and then given the well-established teaching of Kimura '097 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459 and Whale '504 to include APIs for remote connectivity as taught by Kimura '097 because it would be an advantage using existent components of an operating system, thus not incurring in unnecessary costs of implementation, since there are already tools available with the system in use.

Chiba '459, Whale '504 and Kimura '097 disclose all the subject matter as described above except dynamic provisioning to automatically download software as needed to add, delete, update, and customize services.

Chapman '442 teaches dynamic provisioning to automatically download software as needed to add, delete, update, and customize services (column 9, line 36 through column 10, line 15, where the system downloads a plug-in software, and by

downloading the system is updating services by way of add the new updated plug-in and replacing the old one to customize the printer preferences).

Having a system of Chiba '459, Whale '504 and Kimura '097 and then given the well-established teaching of Chapman '442 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504 and Kimura '097 to include dynamic provisioning to automatically download software as needed to add, delete, update, and customize services as taught by Chapman '442 because for allowing for customization to the standard product and a print job without modifying the standard printing system in a non-uniform manner. Further, it would be able to exercise the customization of a print job dynamically from within a print job (column 1, line 66 through column 2, line 3).

Chiba '459, Whale '504, Kimura '097 and Chapman '442 disclose all the subject matter as described above except a web server, and

configuring the embedded system with network information.

However, Engstrom '078 teaches a web server (column 21, lines 45-47), and

configuring the embedded system with network information (column 4, lines 17-20).

Having a system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 and then given the well-established teaching of Engstrom '078 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 to include a web server, and configuring the embedded system with network

information as taught by Engstrom '078 because it would make the Chiba '459, Whale '504, Kimura '097 and Chapman '442 system more versatile and able to have more connections with other devices providing more capabilities for the user to choose.

(4) regarding claim 8:

Chiba '459, Whale '504, Kimura '097 and Chapman '442 disclose all the subject matter as described above except wherein configuring the embedded system enables the embedded system to connect to an edge host.

However, Engstrom '078 teaches wherein configuring the embedded system enables the embedded system to connect to an edge host (column 4, lines 7-28 and Fig. 4B, where 202 it's being interpreted as an edge host).

Having a system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 and then given the well-established teaching of Engstrom '078 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504, Kimura '097 and Chapman '442 to include wherein configuring the embedded system enables the embedded system to connect to an edge host as taught by Engstrom '078 because by doing this the system will be secure and trusted, adding an additional level of security by having an edge server.

(5) regarding claim 9:

Chiba '459 discloses all the subject matter as described above except specifically teaching wherein the edge host manages the queues, messages, services, and transactions associated with the end-to-end operation of the device services.

However, Whale '504 teaches a network server that would performed the same end-to-end operations as that of the edge host (Fig. 6 and paragraph [0050]), therefore it would be within the skills of a person with ordinary knowledge of the art to have the same functionality in an edge server as that of the network server of Whale '504.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the embedded system enables the embedded system to connect to an edge server as taught by Whale '504. By doing this the system will be secure and more efficient, since the edge is performing additional functionalities, thus increasing the versatility.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba et al. (US 7,187,459), Whale (US 2002/0188504), Kimura (US 6,226,097), Chapman US 7,466,442) and Engstrom et al. (US 6,463,078) as applied to claims above, and further in view of Frailong et al. (US 6,496,858).

Chiba '459, Whale '504, Kimura '097, Chapman '442 and Engstrom '078 disclose all the subject matter as described above except wherein configuring the embedded system includes loading network proxy, firewall password, and DNS IP addresses.

However, Frailong '858 further discloses wherein configuring the embedded system includes loading network proxy (column 5, lines 21-23, where a gateway is a proxy server), firewall password (column 5, lines 21-23, where the network security involving a firewall is being interpreted as firewall password since in order to have a secure network it is necessary to have a password to maintain the connection secure of possible threads), and DNS IP addresses (column 12, lines 57-60).

Having a system of Chiba '459, Whale '504, Kimura '097, Chapman '442 and Engstrom '078 and then given the well-established teaching of Frailong '858 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the embedded system of Chiba '459, Whale '504, Kimura '097, Chapman '442 and Engstrom '0787 to include the embedded system connected to an IOT of an electroreprographic device through at least one existing device interface as taught by Frailong '858 because it would allow the system to be configure to work through a network at the same time that is making a secure connection, providing more capabilities for the user to choose.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LENNIN RODRIGUEZ whose telephone number is (571)270-1678. The examiner can normally be reached on Mon - Thur 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LENNIN RODRIGUEZ/
Examiner, Art Unit 2625

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625